

Apparatus and methods for ablating tissue surrounding a tubular anatomical structure such as the wall of a blood vessel or prostatic tissue surrounding the urethra. The apparatus includes an ultrasonic emitter such as a cylindrical emitter and an inflatable annular lens balloon surrounding the ultrasonic emitter. The lens balloon is inflated with a liquid having acoustic velocity different than that of the surrounding medium, so as to form an annular refracting surface. The acoustic energy from the emitter is focused into an annular focal region.

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